

600 Volts. Copper Conductor  
Thermoplastic Insulation/ SIM Nylon Sheath  
Heat, Moisture, Gasoline, and Oil Resistant II  
Also Rated MTW and THWN-2  
SIM Technology® for Easier Pulling



## APPLICATIONS

Southwire SIMpull THHN or THWN-2 conductors are primarily used in conduit and cable trays for services, feeders, and branch circuits in commercial or industrial applications as specified in the National Electrical Code. Voltage for all applications is 600 volts. SIMpull THHN conductors are designed to be used without application of pulling lubricant. Allowable temperatures are as follows:

- THHN or T90 Nylon- Dry locations not to exceed 90° C
- THWN-2- Wet or dry locations not to exceed 90° C or locations not to exceed 75° C when exposed to oil
- TWN75- Wet locations not to exceed 75° C
- MTW- Wet locations or when exposed to oil at temperatures not to exceed 60° C or dry locations not to exceed 90° C (with ampacity limited to that for 75° C conductor temperature per NFPA 79)
- AWM- Dry locations not to exceed 105° C when rated and used as appliance wiring material

## SPECIFICATIONS

Southwire SIMpull THHN ® or THWN-2 or MTW (also AWM) comply with:

- ASTM - All applicable standards
- UL Standard 83, 1581, and 1063(MTW)
- T90 Nylon/TWN75 sizes through 1000 kcmil CSA C22.2 No. 75
- NOM-ANCE 90° C
- Federal Specification A-A-59544
- National Electrical Code, NFPA 70
- VW-1 - Sizes 14 through 1 AWG
- CT rated in sizes 1/0 AWG and larger
- FT1
- AWM - Sizes 14 through 6 AWG. MTW available in stranded only
- NEMA WC-70 Construction Requirements
- RoHS/REACH Compliant

NO EXCEPTION TAKEN	<input checked="" type="checkbox"/>	MAKE CORRECTIONS NOTED	<input type="checkbox"/>
REJECTED	<input type="checkbox"/>	REVISE AND RESUBMIT	<input type="checkbox"/>

GAYNER ENGINEERS' REVIEW IS FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPT AND WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. COMMENTS MADE DO NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING QUANTITIES, DIMENSIONS, ETC. WITH JOBSITE CONDITIONS, FABRICATION PROCESSES, AND TECHNIQUES OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR THE SAFE AND SATISFACTORY PERFORMANCE OF THE WORK, AND FOR COORDINATION OF THE WORK WITH THAT OF ALL OTHER TRADES.

GAYNER ENGINEERS

DATE: May 13, 2013 BY: R. Chow

## Construction

Southwire SIMpull THHN or THWN-2 or MTW copper conductors are soft annealed copper. #14 - 4/0 AWG uses a combination unilay strand and 250 kcmil and larger uses a compressed copper strand. The wire is insulated with a tough heat and moisture resistant poly vinyl chloride (PVC), over which a SIM (SLIKQWIK® Infused Membrane) nylon (polyamide) or UL Recognized equal jacket is applied. Available in black, white, red, blue, purple, green, yellow, orange, brown and gray. Some colors are subject to economic order quantity. Marked sunlight resistant in sizes 2 AWG and larger.

**THWN-2 available in sizes 8 AWG and larger .**

Sizes 14 - 10 AWG are available with SIMpull Technology only in SIMpull Barrel configurations.

Conductor		Insulation Thickness (mils)	Jacket Thickness (mils)	Nominal O.D. (mils)	Approx. Weight per 1000' (lbs)	Allowable Ampacities+			Standard Package
Size (AWG or kcmil)	Number of Strands					60° C	75° C	90° C	
14*	1	15	4	102	15	15	15	15	AC
12*	1	15	4	119	23	20	20	20	AC
10*	1	20	4	150	36	30	30	30	AC
14*	19	15	4	109	16	15	15	15	AC
12*	19	15	4	128	24	20	20	20	AC
10*	19	20	4	161	38	30	30	30	AC
8	19	30	5	213	63	40	50	55	ABCD
6	19	30	5	249	95	55	65	75	ABCD
4	19	40	6	318	152	70	85	100	ABCD
3	19	40	6	346	189	85	100	115	ABCD
2	19	40	6	378	234	95	115	130	ABCD
1	19	50	7	435	299	110	130	145	ABCD
1/0	19	50	7	474	372	125	150	170	ABCD
2/0	19	50	7	518	462	145	175	195	ABCD
3/0	19	50	7	568	575	165	200	225	ABCD
4/0	19	50	7	624	718	195	230	260	ABCD
250	37	60	8	694	851	215	255	290	ABCD
300	37	60	8	747	1012	240	285	320	ABC
350	37	60	8	797	1174	260	310	350	ABC
400	37	60	8	842	1334	280	335	380	ABC
500	37	60	8	926	1655	320	380	430	ABCD
600	61	70	9	1024	1987	350	420	475	ABC
750	61	70	9	1126	2464	400	475	535	BC
1000	61	70	9	1275	3257	455	545	615	C
<p>* Sizes 14 - 10 AWG available with patented Sim Technology® No Lube® jacket only in SIMpull® Wire Barrel configurations.</p> <p>+Allowable ampacities shown are for general use as specified by the 2011 Edition of the National Electrical Code Section 310.15 and 240.4(D). Unless the equipment is marked for use at higher temperatures the conductor shall be limited to the following per NEC 110.14(C).</p> <p>60° C - When terminated to equipment for circuits rated 100 amperes or less or marked for 14 - 1 AWG conductors.</p> <p>75° C - When terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.</p> <p>90° C - THHN dry locations and THWN wet or dry locations for ampacity adjustment purposes using NEC section 310.15.</p>								<p>Standard Package:</p> <p>A - 2500' Reel</p> <p>B - 1000' Reel</p> <p>C - 500' Spool</p> <p>D - 5000' Reel</p>	